Nova Scotia

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ANNUAL REPORT

*for the fiscal year*
*ending March 31, 1990*

# Department of Agriculture and Marketing

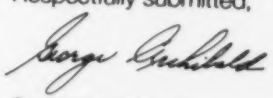
92-04734/

His Honour
The Honourable Lloyd R. Crouse, P.C.
Lieutenant-Governor of Nova Scotia

May It Please Your Honour:

I have the honour to submit the annual report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1990.

Respectfully submitted,



George Archibald
Minister

The Honourable George Archibald
Minister of Agriculture and Marketing
Province of Nova Scotia
Halifax, Nova Scotia

Dear Sir:

I have the honour of presenting the annual report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1990.

Respectfully submitted,

Ralph Morehouse
Deputy Minister

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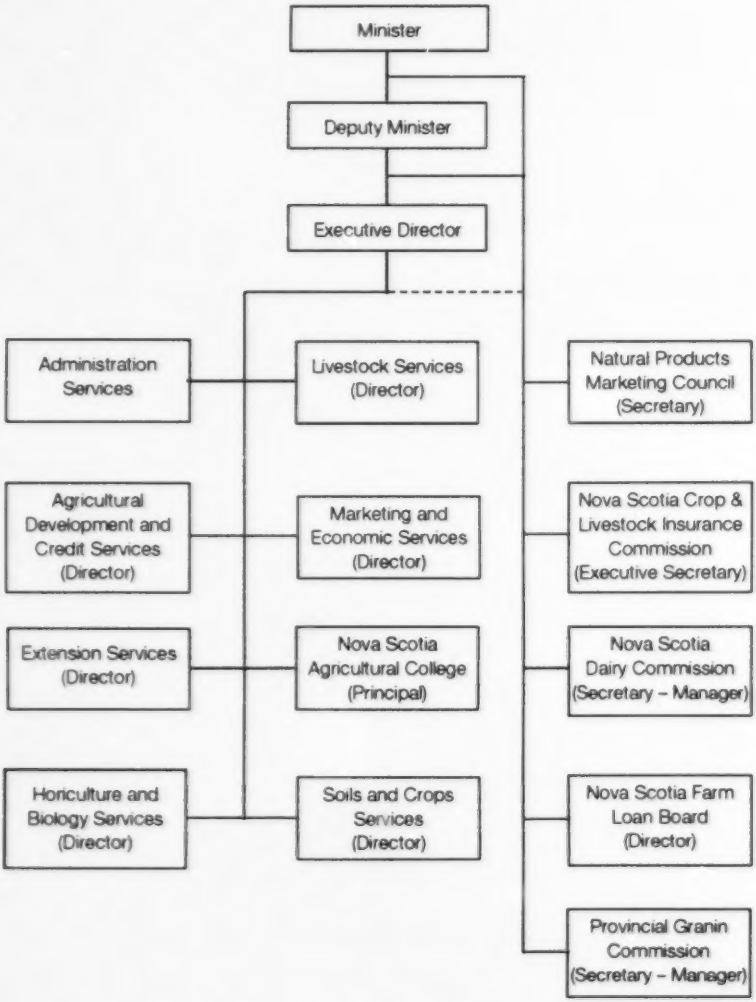
## ORGANIZATIONAL CHART
## OF THE NOVA SCOTIA
## DEPARTMENT OF AGRICULTURE AND MARKETING


Minister
Deputy Minister
Executive Director
Administration Services
Livestock Services (Director)
Natural Products Marketing Council (Secretary)
Agricultural Development and Credit Services (Director)
Marketing and Economic Services (Director)
Nova Scotia Crop & Livestock Insurance Commission (Executive Secretary)
Extension Services (Director)
Nova Scotia Agricultural College (Principal)
Nova Scotia Dairy Commission (Secretary – Manager)
Horticulture and Biology Services (Director)
Soils and Crops Services (Director)
Nova Scotia Farm Loan Board (Director)
Provincial Granin Commission (Secretary – Manager)

## NOVA SCOTIA AGRICULTURAL COLLEGE

### OVERVIEW

Enrollment in the Nova Scotia Agricultural College's degree program declined slightly in 1989-90 following the gradual trend of the last couple of years. Analysis indicated that the decline corresponded to a decline in the number of rural males. Enrollment in technical and technician programs was sustained. A survey of student attitudes conducted by Economics and Business faculty found that students associate agriculture entirely with farming.

A Principal's Task Force was formed to address the College's recruitment problem and a new strategy will begin for the 1991–92 year.

However, even before this recruitment program got under way, the enrollment of first-year students had increased dramatically for the 1990–91 year.

On July 1, 1990, Robert Stevens assumed the duties of Dean of Student Services.

A new office of Student Services and the Registrar was established in Cox Institute. At the same time, all the administrative functions of the College were combined in Cumming Hall with the Dean of Vocational and Technical Training joining the Principal and Vice-Principal.

Reorganization of the Nova Scotia Agricultural College internal governance resulted in the development of the Academic Planning Committee and a Financial and Physical Planning Committee. The functioning of faculty council and committees was also reorganized.

A number of new faculty appointments were made in 1989–90, including a new appointment in Food Science, which will allow us to begin the Food Technology program, and the appointment of an ecologist for the development of Environmental Biology.

The 70 Nova Scotia Agricultural College faculty members attracted research funds in excess of $1.6 million. This places the College fourth in research grant money of all universities in Nova Scotia.

## COURSES OFFERED

### Degree

A complete four-year program leading to a degree in Agricultural Sciences (B.Sc.(Agr.)) is offered with a choice of the following options:

- Agricultural Chemistry
- Agricultural Economics
- Agricultural Mechanization
- Agriobiology: Plant Protection
- Animal Science
- Plant Science
- Soil Science

Most students complete their degree at the Nova Scotia Agricultural College, but they may also pursue other options without interruption by transferring to the B.Sc.(Agr.) program at Macdonald College of McGill University, the University of Guelph, the University of Maine, or the faculty of Agriculture at another university.

Students who successfully complete the three years of the Agricultural Engineering diploma program can proceed to Macdonald College of McGill University or the University of Guelph to complete their program of study. A two-year Engineering diploma program is built into the three-year program for students proceeding to any specialty at the Technical University of Nova Scotia.

Students who wish to take the two-year Pre-Veterinary program to meet admission requirements of the Atlantic Veterinary College at the University of Prince Edward Island will be counselled in their selection of courses regarding blending of the Pre-Vet program with the options of the B.Sc.(Agr.) program.

### Technician

The following two-year programs of study are offered:

- Agricultural Business
- Agricultural Engineering
- Animal Science
- Farm Equipment
- Plant Science

**Technology**

The following two-year programs of study are offered:

- Chemistry Laboratory Technology
- Landscape Horticulture Technology

The following two-year programs are offered only to students who have successfully completed one year of a specified technician course (or equivalent):

- Agricultural Engineering Technology
- Farming Technology

Three-year programs are offered in:

- Animal Health Technology
- Biology Technology
- Food Laboratory Technology

Agricultural Technology is a one-year program tailored to meet the needs of the student. Only Technician graduates are eligible to apply for this course.

**REGISTRATION: 1989–1990**

| | | |
|---|---|---|
| 1st-year B.Sc.(Agr.) | 91 | |
| 2nd-year B.Sc.(Agr.) | 78 | |
| 3rd-year B.Sc.(Agr.) | 50 | |
| 4th-year B.Sc.(Agr.) | 54 | |
| *Subtotal B.Sc.(Agr.)* | | *273* |
| 1st-year Engineering | 11 | |
| 2nd-year Engineering | 8 | |
| *Subtotal Engineering* | | *19* |
| 1st-year Technicians | 47 | |
| 2nd-year Technicians | 39 | |
| *Subtotal Technicians* | | *86* |
| 1st-year Technology | 51 | |
| 2nd-year Technology | 41 | |
| *Subtotal Technology* | | *92* |

| | | |
|---|---|---|
| **Total full-time students** | | **470** |
| Special students | 25 | 25 |
| **Total all students** | | **495** |

## VOCATIONAL AND CONTINUING EDUCATION PROGRAMS

Vocational courses have been designed to assist men and women enter or progress in farm or farm-related careers. Forty-four courses were held with 772 persons enrolled, totalling 7,974 student training days.

Employment and Immigration Canada sponsored 207 persons by paying tuition and a training allowance. Details on enrollment can be seen in the following tables:

| Province | Number of Students | | | % of Total Students | | |
|---|---|---|---|---|---|---|
| | 1987–88 | 1988–89 | 1989–90 | 1987–88 | 1988–89 | 1989–90 |
| Nova Scotia | 533 | 489 | 542 | 75.3 | 68.1 | 70.2 |
| New Brunswick | 75 | 98 | 118 | 10.5 | 13.6 | 15.3 |
| Prince Edward Is. | 58 | 65 | 46 | 8.2 | 9.1 | 6.0 |
| Newfoundland | 29 | 50 | 48 | 4.1 | 7.0 | 6.2 |
| Other residents | 13 | 16 | 18 | 1.9 | 2.2 | 2.3 |
| **Total enrolled** | **708** | **718** | **772** | | | |
| **Total graduated** | **658** | **684** | **744** | | | |
| **Total sponsored by E.I.C.** | **276** | **236** | **207** | | | |
| **Total student training days** | **10,136** | **8.804** | **7,974** | | | |

### RESEARCH PROJECTS

The following figures represent the disbursement of research funds for the fiscal year 1989–90 as of March 31, 1990. In many instances, the actual income to research activities will be higher than these figures owing to differences in the definition of the fiscal year. However, it is felt that these numbers give a realistic picture of the research activity at the Nova Scotia Agricultural College in terms of dollars.

| Funding | Research Spending 1989–90 |
|---|---|
| N.S. Department of Agriculture & Marketing | $271,881 |
| Atlantic Livestock Feed Initiative (ALFI) | 592,986 |
| Canada–Nova Scotia Agri-Food Development Agreement (AFDA) | 290,570 |
| Natural Sciences and Engineering Research Council (NSERC) | 127,949 |
| Outside research grants | 166,278 |
| Outside research contracts | 129,277 |
| Agricultural Research Institute (ARI) | 6,531 |
| Atlantic Poultry Research Institute (APRI) | 40,266 |
| Other research institutes | 25,412 |
| **Total all sources** | **$1,651,150*** |

* This figure represents an increase of 13.7 per cent over the equivalent value for the fiscal year 1988–89.

**COLLEGE FARM**

The College Farm provides teaching, research, and demonstration facilities and materials for all departments within the College, particularly the Department of Animal Science. The Farmstead Planning Committee and the Department of Animal Science have been actively planning for new and remodelled livestock facilities on the College Farm, as our present facilities are being taxed to their limit.

The College Farm, which consists of approximately 210 hectares (520 acres) of upland, interval, marshland, and woodlands, provides all the forage needs for the farm. Approximately 80 hectares (200 acres) of forage were grown and harvested specifically for nutrition trials.

A summary of the crops grown during 1989 is as follows:

| Crop | Hectares | Acres |
|---|---|---|
| Research plots | 7 | (17.29) |
| Annual ryegrass | 10 | (24.7) |
| Legume forage | 71 | (175.37) |
| Grass forage | 43 | (106.21) |
| Corn silage | 4 | (9.88) |
| Improved pasture | 27 | (66.69) |
| Cultivated pasture | 20 | (49.04) |
| Barley | 15 | (37.05) |
| Woodland | 13 | (32.11) |
| **Total** | **210** | **(518.34)** |

Twenty student research projects and 12 faculty research projects used the livestock and poultry facilities during the year.

Beginning and year-end inventories remained fairly steady as indicated below:

| Species | April 1989 | March 1990 |
|---|---|---|
| Beef cattle | 162 | 140 |
| Dairy cattle | 98 | 94 |
| Sheep | 167 | 253 |
| Swine | 440 | 400 |
| Foxes | 136 | 112 |
| Mink | 96 | 102 |
| Horses | 4 | 11 |
| Poultry | 4,785 | 3,645 |

## LIVESTOCK SERVICES BRANCH

### OVERVIEW

The Livestock Services Branch serves the livestock industry in four general areas: provides expertise in feeding, breeding, and management; provides rapid and accurate diagnosis of animal diseases for practising veterinarians and farmers; provides regulations pertaining to the production, inspection, distribution, and sale of milk; and provides for the inspection of red meat abattoirs.

The beef industry received lower slaughter cattle prices during 1989. Prices paid at the Truro Feeder Sales averaged 3.24¢ higher than those received in 1988. The Beef Herd Improvement Policy helped to provide economic stability to the beef cow-calf sector. The comprehensive farm development program of the Agri-Food Development Agreement has encouraged expansion in the cow-calf sector.

The sheep industry in 1989 experienced strong prices and good demand for lambs at the various markets. The check-off for wool in 1989 was six cents per pound: four cents for the operation of the Sheep Producers Association of Nova Scotia and two cents for the operation of the Nova Scotia Wool Marketing Board.

The swine industry remained concerned about its low marginal profit. A total of 149 producers were enrolled in the Pork Stabilization Program at the end of 1989, representing over 99 per cent of the total provincial production. The province leads the rest of Canada in the quality of hogs marketed.

The dairy sector represents the largest single segment of the livestock industry. One hundred and eighty-four herds participated in the A.D.L.I.C. Owner-Sampler Program. The Nova Scotia Dairy Commission reports 552 producers as of December 31, 1989.

The following are the shipments and utilization percentages of milk from our fluid and industrial shippers:

| | | |
|---|---|---|
| Total milk shipments | 173 009 818 L | |
| Utilized as fluid milk | 112 582 430 L | 65.1% |
| Utilized for other purposes | 60 427 388 L | 34.9% |
| Producers' blend price — fluid | $52.10 | |
| — Industrial | $42.12 | |

The dollar value of milk received by our dairy plants in 1989 was $91.9 million.

The poultry industry segments — egg, chicken, turkey, and pullet — are all under a supply management system. The total cash farm income from the poultry industry is $63,076,000.

The Veterinary staff and laboratory facilities support all branches of the Department of Agriculture and Marketing and provide diagnostic services to the Department of Lands and Forests. Laboratory submissions for all species in 1989 were 8,820 specimens.

The Livestock Health Services Program assisted 40 veterinarians in 18 clinics during 1989, working under 20 Livestock Health Services Boards.

Another program to assist the livestock owners is the Herd Health Assistance Policy.

The fur sector experienced low prices. Mink ranches maintained their level of production. The chinchilla sector has seen renewed interest with a number of new entrants. Low pelt prices in the fox sector has resulted in many producers' pelting out. There are 151 licensed mink ranchers, 217 licensed fox ranchers, and 20 licensed chinchilla ranchers.

## BEEF

### Production

The following table outlines the total cattle population estimates for January 1990, with previous estimates for comparison purposes:

**Nova Scotia Cattle ('000)**

| | Jan. 90 | Jan. 89 | Jan. 88 | Jan. 87 | Jan. 86 | Jan. 85 | Jan. 84 |
|---|---|---|---|---|---|---|---|
| Bulls | 1.8 | 1.8 | 1.9 | 1.8 | 1.7 | 1.7 | 1.7 |
| Milk cows | 33.3 | 33.3 | 33.3 | 35.6 | 35.4 | 36.3 | 35.9 |
| Beef cows | 22.5 | 22.5 | 22.5 | 26.7 | 26.6 | 26.3 | 26.0 |
| Milk heifers | 15.2 | 15.2 | 15.3 | 14.9 | 15.0 | 15.2 | 15.0 |

| | Jan. 90 | Jan. 89 | Jan. 88 | Jan. 87 | Jan. 86 | Jan. 85 | Jan. 84 |
|---|---|---|---|---|---|---|---|
| Beef heifers – replacement | 5.5 | 5.5 | 5.5 | 7.2 | 7.1 | 7.1 | 7.0 |
| Beef heifers – slaughter | 4.5 | 4.5 | 4.5 | 3.8 | 3.7 | 3.6 | 3.7 |
| Steers over one year | 7.0 | 7.0 | 7.0 | 11.0 | 10.5 | 10.2 | 10.2 |
| Calves under one year | 30.2 | 30.2 | 30.0 | 34.0 | 36.0 | 36.6 | 33.5 |
| **Total** | **120.0** | **120.0** | **120.0** | **135.0** | **136.0** | **137.0** | **133.0** |

**Prices**

Slaughter cattle prices declined slightly in 1989. A1, A2 steers averaged $74.05/cwt at the Truro sale, compared to $75.06/cwt in 1988.

During the same period D1, D2 cows sold at $54.88/cwt, compared to $56.44/cwt in 1988.

In 1989, two feeder cattle sales were held in Truro. The overall average for both sales on the 2,383 cattle was 91.80¢/lb., which was 3.24¢ higher than in 1988.

**Average Price — Truro Feeder Sale**

| 1989 | 1988 | 1987 | 1986 | 1985 | 1984 | 1983 | 1982 | 1981 |
|---|---|---|---|---|---|---|---|---|
| $91.80 | $88.56 | $97.02 | $79.08 | $74.58 | $76.35 | $72.05 | $67.10 | $65.38 |

Choice and good steer calves averaged 102.03¢/lb., compared to 102.95¢/lb. in 1988. Quality was extremely high at both sales. The sales returned a total of $1,173,949 for the 1,354,450 pounds of feeders sold.

**Improved Sire Policy**

Assistance was paid on the purchase of bulls during the year as follows:

| | 1989 | 1988 | 1987 | 1986 | 1985 |
|---|---|---|---|---|---|
| Purebred herd sires | 44 | 42 | 23 | 31 | 29 |
| Commercial head sires | 184 | 198 | 187 | 156 | 191 |
| Total assistance paid | $ 84,200 | $ 89,400 | $ 76,200 | $ 71,800 | $ 79,500 |
| Value of bulls | $377,961 | $377,536 | $281,235 | $250,593 | $300,227 |

All bulls must be performance tested, either at home or at the Maritime Beef Cattle Test Station, and must meet minimum standards for rate of gain and yearling weight. This policy has helped to reduce time spent on selection and inspection of bulls and has helped to educate producers in the use of performance records and their application to practical breeding programs.

**Beef Herd Improvement Policy**

The purpose of this program is to improve and develop beef cow herds in Nova Scotia and to provide some economic stability to the beef cow-calf sector of the industry.

| | 1989 | 1988 | 1987 |
|---|---|---|---|
| Number of applications | 512 | 503 | 482 |
| Number of animals paid on —total number | 3,851 | 3,695 | 3,557 |
| Average per application | 7.52 | 7.34 | 7.38 |
| Amount of money paid out —total amount | $616,120 | $591,200 | $569,120 |
| Average per application | $ 1,203 | $ 1,175 | $ 1,181 |

**Performance Testing**

We continue to participate in the Federal-Provincial Record of Performance (R.O.P.) Beef Program. This program is designed to assist breeders in selecting replacement heifers and herd sires on the basis of rate of gain. It is a very valuable aid in a selection program. During the fall of 1989, 215 herds were enrolled in Home Test.

In addition, the Maritime Beef Cattle Test Station continues to operate on a year-round basis at Nappan. Since 1966, 3,369 bulls have been tested at Nappan.

During 1989, 232 bulls were tested at Nappan. About 51 per cent of all bulls tested were from Nova Scotia.

The test station at Nappan also offers excellent facilities for the Annual Bull Sale held in April of each year.

**Community Pastures**

Livestock numbers on community pastures decreased slightly during 1989. No sheep were put on community pastures in 1989, due to coyote problems.

The Cape John Pasture had 560 head of cattle. The cattle did well on pasture with an Average Daily Gain of 2.06 pounds. No disease or management problems were encountered. In general, patrons were satisfied with livestock performance on the Cape John Pasture in 1989.

The Cape Mabou Pasture had 512 head of cattle pastured. Cattle performance was excellent with an average gain of 1.90 pounds/day reported.

The six co-operative pastures located at L'Ardoise, Cheticamp, Mira, Glendale, Manchester, and Digby were operated under the management of the local co-operatives.

**SHEEP**

**Production**

The sheep industry was highlighted in 1989 by strong prices and a strong demand for lambs in all markets.

Northumberlamb Marketing Co-op was successful in 1989, marketing 4,000 lambs. There were 36,000 sheep in Nova Scotia, as recorded on July 1, 1989, a decrease of 2,000 from the previous year.

The Home Test Record of Performance program provides a mechanism for measuring the performance of animals within the flock. A Flock Health Program was piloted in 1989.

**Prices**

Lamb and mutton prices at the Maritime Cattle Market were strong in 1989. The volume offered through the market was approximately 6,474 lambs. The average price was 98.08¢/lb., according to the Market Report.

The Annual Breeding Stock Sale, sponsored by the Purebred Sheep Breeders Association of Nova Scotia, sold 124 head for a gross of $20,295. Animals sold were ewe lambs, yearlings, two-year olds, rams, and mature ewes.

| | 1989 | | 1988 | | 1987 | | 1986 | |
|---|---|---|---|---|---|---|---|---|
| | No. | Average | No. | Average | No. | Average | No. | Average |
| Ewe Lambs | 17 | $144.12 | 54 | $ 93.70 | 35 | $145.20 | 18 | $ 93.60 |
| Yearlings | 42 | 135.95 | 36 | 112.36 | 13 | 78.33 | 18 | 124.33 |
| Two-year-olds | — | | — | | — | | 6 | 149.50 |
| Rams | 25 | 287.64 | 16 | 291.88 | 27 | 251.87 | 16 | 229.50 |
| Mature ewes | 40 | 124.50 | 11 | 111.82 | 19 | 164.75 | 57 | 87.40 |

**Assistance Policies**

The Livestock Services Branch supervised three sheep policies in 1989. They were the Improved Sire Policy, the Sheep Production Policy, and the Sheep Pasture Improvement Policy.

*Improved Sire Policy (January 1, 1989–December 31, 1989)*

| | |
|---|---|
| Total number of rams bonused | 31 |
| Suffolk | 17 |
| Dorset | 2 |
| North Country Cheviot | 8 |
| Clun Forest | 1 |
| Hampshire | 3 |
| Total assistance | $1,644 |

*Sheep Production Policy (January 1, 1989–December 31, 1989)*

| | |
|---|---|
| Number of yearlings Bonused | 1,325 |
| Number of producers | 50 |
| Total assistance | $27,500 |

*Sheep Pasture Improvement Policy*
*(January 1, 1989–December 31, 1989)*

| | |
|---|---|
| Approximate number of acres fenced | 250 |
| Land cleared (acres) | 15 |
| Number of producers | 37 |
| Total assistance | $12,219.40 |

## GOATS

During 1989, a number of shows sponsored by the Goat Association were held. Four commercial dairy goat operations support the commercial dairy in Elmsdale. A cottage goat cheese industry has started in Aylesford. There were a number of 4-H Clubs in the province with dairy goat projects.

## PREDATOR CONTROL

A compensation program administered by the Department of Lands and Forests paid compensation to sheep producers for 958 sheep and lambs killed by coyotes. Coyotes have forced many small producers out of business.

## SWINE

### Production

A total of 245,525 hogs were marketed through the Pork Producers Marketing Board of Nova Scotia. This was an increase of 12,135 or 5.2 per cent compared to 1988. The average value per hog marketed was $111.89. The average weekly price for 100 index hogs for 1989 was $61.00/cwt. The gross value of these hogs was $27,469,308.

### Pork Quality

Nova Scotia has perennially been the leading province in Canada in quality of hogs marketed. The average index of the animals is usually

higher than the other provinces. In 1989, the Nova Scotia average index of hogs marketed was 104.9 (1988–104.3). This was combined with an average dressed weight of 174.8 lbs. (1988–176.1 lbs.) The Canadian average index of hogs marketed was 103.7 (excluding Alberta). The Atlantic Provinces average index was 103.2

**Record of Performance Testing**

There continued to be strong support for both home and station testing of swine in 1989. In 1989, 1,052 boars and 4,171 gilts were tested on the Home Testing Program. There was an increase of 1.5 per cent compared to 1988.

**Swine Herd Health Program**

There were 86 pork producers enrolled in the Swine Herd Health Program, utilizing the services of eight local veterinarians. This program has improved the overall management and health situations in our swine herds. It is of even greater importance during periods of low pork prices, when top performance is necessary.

**Improved Sire for Swine**

The quality of hogs marketed in Nova Scotia is in a large measure due to the continued use of the best performance-tested boars available. Assistance was paid on a total of 253 boars. Landrace accounted for 76; Yorkshire, 70; Hampshire, 20; Duroc, 36; and Crossbred, 51.

**Pork Stabilization Program**

A total of 145 pork producers are enrolled in this program, representing over 99 per cent of total production. This program has been very valuable in maintaining our industry through the continued low price periods in recent years. Without this program, many producers would have found it very difficult to survive owing to present economic conditions.

**Swine Breeding Stock Sales**

The dollar value for swine breeding stock decreased in 1989. With the importance of good carcass grade, quality stock remained a priority. The value of stock sold through the Nova Scotia Swine Breeding Stock Sales Society was $50,015.

**Producer Organizations**

Keeping close to the swine industry is important; it is the key to developing policies and programs needed to help the swine sector program. There continues to be a close working relationship with the Pork Producers Marketing Board of Nova Scotia and the Pork Producers Association of Nova Scotia.

At their annual meeting, the two producer organizations amalgamated into one. This new organization is called Pork Nova Scotia.

## POULTRY

**Production**

The Nova Scotia poultry industry is broken down into five economic production divisions as follows:

Egg production
Pullet production
Broilers
- Cornish chicken
- Light
- Regular
- Roasting

Turkeys
- Broilers
- Hens
- Toms

Hatchery

In Nova Scotia, there are five registered hatcheries. The egg segment has 41 registered producers who produced 16.5 million dozen eggs. There are 18 commercial pullet producers with a total quota of 698,000 pullets.

Nova Scotia's registered chicken producers grew approximately (18.5 million kg) 40,700,000 pounds (eviscerated weight) of chicken. Eighteen registered turkey producers produced (3.2 million kg) 7,040,000 pounds (eviscerated weight) of turkey.

### Blood Testing Program

The branch continued an extensive blood testing and vaccination program for exhibition birds. In 1989, there were over 2,500 birds in the 4–H Poultry Project. The unbanded exhibition birds will continue to be tested for Pullorum.

There were no outbreaks of I.L.T. in 1989.

## DAIRY

### Production

Milk production for the year from our fluid farms was 173 009 818 L (391,002,188 lbs.), a decrease of 24 per cent over the previous year.

The number of dairy cattle on farms shipping fluid milk in 1989 was 29,000. This number reflects an average herd size of 53 cows. The number of licensed milk producers recorded on January 1, 1989, was 564. Seventeen producers left the industry, five producers entered the dairy business, leaving a net figure of 5,552 producers at year-end.

### Dairy Cattle Sales

Prices for fresh cows and heifers were up slightly. Milk production per cow was down slightly over the previous year.

| | Number of Dairy Cows | | | |
|---|---|---|---|---|
| | **Jan. 1/90** | **Jan. 1/89** | **Jan.1/88** | **Jan. 1/87** |
| Cows for milk | 29,000 | 29,000 | 29,000 | 29,000 |
| Replacement heifers | 12,000 | 11,500 | 11,500 | 12,500 |
| **Total** | **41,000** | **40,500** | **40,500** | **42,500** |

### Dairy Herd Analysis Service

As of December 31, 1989, there were 184 herds on the Owner-Sampler A.D.L.I.C. Program. These 184 herds represent 9,711 cows.

As of December 31, 1989, the 138 herds that had completed at least 12 months on the program had a rolling herd average of 6,810 kg (14,982 pounds) of milk with 3.5 per cent butterfat test. Production per cow increased by 66 kg (145 pounds) as compared to a year earlier. The top unofficial herd average in 1989 was 9,761 kg (21,523 pounds), which is down slightly from last year. Top official herd average for Owner-Sampler A.D.L.I.C. was 8,780 kg (19,316 pounds).

The main thrust of the dairy section is involvement in and supervision of the A.D.L.I.C. Program and Dairy Cattle Extension Field Services. The section is also involved with breed associations, the Nova Scotia Federation of Agriculture, the Nova Scotia Milk Producers Association, the Canadian Milk Recording Board, exhibitions, 4–H Clubs, the Holstein Sire Selection Committee, and the Nova Scotia Animal Breeders' Cooperative.

**VETERINARY**

The Veterinary Section has responsibility in the following areas:

- collaborates extensively with the Food Production and Inspection Branch of Agriculture Canada in disease control and Canada Domestic Inspection;
- is responsible for the Livestock Health Services Program, which operates under the Livestock Health Services Act and is carried out by local Livestock Health Services Boards. This program provides for the delivery of veterinary service to livestock owners;
- is responsible for the Swine Herd Health Program, which is available across the province through eight veterinary practices;
- is responsible for the Provincial Meat Inspection Program;
- operates the Veterinary Pathology Laboratory, which processes and reports on specimens from all animal species for producers and veterinarians;
- works closely, and often collaborates, with other sections of the Livestock Services Branch, other branches of the department (including the Nova Scotia Agricultural College), and other departments of government.

## LIVESTOCK HEALTH SERVICES PROGRAM

This program is carried out under the Livestock Health Services Act in 18 clinics by approximately 40 veterinarians working under 20 Livestock Health Services Boards. The number of veterinarians in large animal practice varied slightly throughout the year, and the numbers have gradually increased over the past several years. This program is responsible for the delivery of veterinary service to livestock producers in Nova Scotia. The number of services provided, kilometers driven, and the payments to Livestock Health Services Boards for 1986, 1987, 1988, and 1989 are shown below:

| Year | Clinic Calls * | # Farm Calls * | Distance Driven * | Payments to LHS Boards ** |
|---|---|---|---|---|
| 1989 | 1,435 | 23 649 | 952,793 | $1,215,890 |
| 1988 | 1,471 | 27,012 | 1,035,253 | 1,200,740 (b) |
| 1987 | 1,466 | 26,565 | 992,505 | 1,304,000 (a) |
| 1986 | 1,556 | 27,909 | 1,048,028 | 1,302,000 |

* Data from monthly statements that veterinary practice centres submit to LHSB for payment.

** Payments to veterinary practice centres are somewhat less than funds requested by LHSB for 1986–87.

### Swine Herd Health Programs

The Swine Herd Health Program has developed successfully. Many producers find bimonthly and quarterly visits sufficient. The Department of Agriculture and Marketing pays the veterinarian's call fee and one-third of his/her hourly rate. There are approximately 80 herds enrolled in this program.

### Veterinary Pathology Laboratory

The number of laboratory submissions has stabilized in recent years. Hematology and chemistry submissions remain the same as previous years.

The bovine chemistry submissions are primarily related to herd profiling and have become an important part of evaluating herd nutritional status.

## FUR FARMING

The fur sector continued to make a large contribution to the agricultural community in Nova Scotia. The total pelt crop for 1989 was down slightly from 1988, and prices received were down from the previous selling season, with prices received for the 1989 crop well below the cost of production.

The chinchilla sector was the exception, with increases continuing in producers, breeder females housed, and pelts produced, which reflects increasing pelt prices.

### Mink Ranching

Mink ranching continues to be the largest section of fur farming in Nova Scotia. There are presently 151 licensed producers within the province, keeping in excess of 75,000 breeder females. Digby County continues to be the stronghold of the mink industry, keeping 76 per cent of the total females in the province.

The total mink kit production in Nova Scotia is approximately 278,000, which is the second highest total in Canada. Ninety per cent of Nova Scotia's mink production is dark mink.

The main auctions held in Canada were at the Hudson's Bay Company, Toronto, in January and February, 1990, with pelts also going to the Seattle Fur Exchange.

The overall pelt average at Canada Mink Breeders sponsored sales to date for 1989 production is $22.37. This price is $18 per pelt below the cost of production.

The farm gross in the 1989-90 pelting season amounted to approximately $6,100,000. This was $3.6 million below the farm gate value in 1988–89. The industry has experienced difficulty.

### Fox Ranching

Fox pelt production declined in 1989 but still maintains the position of the province being the largest producer of foxes in Canada. Two hundred and seventeen licensed producers in the province kept 6,988 breeder females. The largest producer keeps in excess of 300 females. Approximately 23,000 pelts were produced, generating approximately $1 million in gross farm receipts.

Silver fox continues to be the predominant fox raised in Nova Scotia. The other types raised are pearl platinum and platinum. The Canadian average for silver fox in 1989 was $40. This is down $31.27 from the 1988 average. Only 50 per cent of the 1989 crop is sold.

Since its establishment in 1984, the Nova Scotia Fur Institute has been very active in both research and extension. During 1989, research projects were initiated to review the feasibility of the fur sector by staff of the Animal Science Department of the Nova Scotia Agricultural College, in cooperation with the fur section of the Livestock Services Branch.

**Chinchilla Ranching**

This sector of the fur industry has experienced growth with 20 licensed producers, keeping 1,200 breeders. Pelt prices in 1989 reached a high of $110 U.S., a $30 increase from 1988.

## MARKETING AND ECONOMICS BRANCH

### OVERVIEW

The Marketing Services Branch provides leadership and assistance in the marketing of Nova Scotia agri-food products. Through consultation and liaison with all levels of the marketing system, programming has been developed in the areas of market analysis and research, market information, administration of government policies and regulations, product development and promotion, market development, education, and audio-visual services. While the 15 staff members are divided into four sections — Administration, Information and Regulations, Market Development, and Audio-Visual — most programs are the result of a cooperative effort.

### THE NOVA SCOTIA NATURAL PRODUCTS MARKETING COUNCIL

Under the authority of the Natural Products Act, the Natural Products Marketing Council supervises the province's agricultural marketing boards:

Nova Scotia Wool Marketing Board, established 1947

Pork Producers Marketing Board of Nova Scotia, established 1952

Nova Scotia Chicken Marketing Board, established 1966

Nova Scotia Egg & Pullet Producers Marketing Board, established 1966

Nova Scotia Turkey Marketing Board, established 1972

Nova Scotia Flue-Cured Tobacco Growers Marketing Board, established 1973

Nova Scotia Grain Marketing Board, established 1981

Nova Scotia Potato Marketing Board, established 1982

Nova Scotia Evening Primrose Marketing Board, established 1986

Nova Scotia Processed Pea & Bean Marketing Board, established 1987

Nova Scotia Greenhouse Vegetable Marketing Board, established 1988

The Natural Products Marketing Council met six times to deal with marketing board administration. In addition, four pricing arbitration meetings of the Nova Scotia Chicken Marketing Board were held, a chicken industry meeting was chaired, several meetings of the Potato Price Advisory Committee were chaired, and a price settlement was made for processing peas.

Council also met several times with apple producers regarding a provincial plan, prior to its defeat in a May plebiscite. A national plan was subsequently discussed. The Pork Producers Association of Nova Scotia amalgamated with the Nova Scotia Pork Producers Marketing Board to form Pork Nova Scotia. Discussion of amalgamation between the Sheep Producers Association of Nova Scotia and the Wool Marketing Board continued. Greenhouse producers worked on pricing, licensing, and communication problems. Tobacco producers suffered from a severe hail storm. The evening primrose industry was inactive.

The council hosted a National Farm Products Marketing Council and Provincial Agricultural Marketing Supervisory Association seminar at Liscombe Lodge in July 1989. National supply management concerns involved chicken, eggs, and turkey.

**ECONOMICS PROGRAM**

The branch provides economic analysis and associated services with respect to policy issues. The impact of the ongoing multilateral trade negotiations (GATT, Uruguay Round) on agriculture and on subsequent provincial and national positions was considered. Work on the Canada-U.S. Free Trade Agreement centered on accelerated tariff elimination, specifically on beef, honey, grain sorghum, and yellow dent corn. An agriculture chapter was added to the report of the Nova Scotia Adjustment Advisory Council.

Many developments were under way during the year involving feed grain and related policies. Work was done with the Feed Freight Assistance Review Committee in an attempt to improve the program. Several discussion papers and presentations resulted. The Nova Scotia Federation of Agriculture established a Feed Grain Policy Group. Countervail duty on U.S. corn increased feed cost to Nova Scotia producers by an estimated $2.25 million. Submissions on its effect were prepared in anticipation of exemption considerations under the Special Import Measures Act. The termination of the "At and East" Export Grain

Program and the Feed Freight Assistance on milling wheat and their effects were analyzed and developed into a regional strategy. A study on importing grain sorghum as a substitute for corn proved there were benefits to this approach.

In other economic matters, the effects of a large greenhouse complex in Newfoundland on local producers were analyzed, as were the effects of a number of national programs on the cost of local hog production and the implications of joining the National Tripartite Program.

## MARKET RESEARCH AND ANALYSIS

Obtaining and interpreting market information is essential to effective market strategies and programs. Throughout 1989–90, a number of research projects were initiated or continued:

- Direct Marketing Survey was conducted on farmers' markets, roadside markets, U-pick operations, and consumer attitudes;
- Fox Market Study determined an organizational model for coordinated market development;
- Nova Scotia Lamb Market Review profiled the present market including consumer behavior;
- Nova Scotia Foodservice Study reviewed the industry, local suppliers, and produce and purchasing practices;
- Armstrong Select Nova Scotia Beef was a pilot project to determine the acceptability of local beef.

## MARKET INFORMATION

Aside from servicing individual requests, a variety of general market information services were made available to the Nova Scotia agricultural community.

*Market Report*
This report, giving local agricultural product prices on a bi-weekly basis, was subscribed to by 1600 individuals in 1989–90.

*Branch Update*
An internal departmental letter gave regular marketing information to staff in other branches.

*Market Update*
An external letter gave information on popular marketing topics.

*Marketing Facts*
Produced on an ad hoc basis, its intent was to describe various marketing topics and report on subjects such as marketing surveys.

*Fresh Produce Supply Forecast*
Thirteen issues were distributed weekly to 250 subscribers (wholesalers, retailers, media, and individuals). Fifty additional letters were provided to "Taste of Nova Scotia" restaurants.

*Focus on Foodservice*
This letter to foodservice operators provided information on timely topics.

*The Pronet Information Database*
Market activity, particularly in the United States, was tracked by this service.

*The Market Line*
A telephone-recorder offered daily-updated fruit and vegetable market information.

*The Harvest Line*
Working with the Farm Fresh Marketing Association, information on produce availability at U-Picks and roadside stands was given to consumers through a weekly newspaper listing and a daily phone line.

*Tree Fruit Market Update*
A weekly tracking of tree fruit markets was made available from September to February to over 60 growers, packers and others.

*W.B.A.N.A. Newsletter*
The branch served as editor to the international wild blueberry newsletter, issued quarterly.

*The Remote Bulletin Board Service*
An instant, electronic information service to computer users, carried news items, market information and farm management information.

*The Nova Scotia Agriculture & Marketing Update*
A radio program, carried by four to six stations, offered three-minute interviews on 109 different topics in 1989–90.

## TARIFFS

The Branch continued the administration of the seasonal tariff application and removal on imported fruits and vegetables for the Maritime Tariff Zone. Products affected by tariffs in the 1988–90 season included snap beans, beets, broccoli, cabbage, carrots, cauliflower, sweet corn, cucumbers, lettuce, onions, shallots, pears, plums, strawberries, and tomatoes.

## REGULATIONS

In order to administer the Nova Scotia Fruit and Vegetable Regulations, the branch maintained a close working relationship with federal inspectors of Agriculture Canada, and Consumer and Corporate Affairs. During 1989–90, 87 detentions were reported.

Recently passed controlled atmosphere storage regulations were put into force in 1989.

Discussion continued on several levels on questions concerning food safety and regulating "organic" produce.

Experimental grades were authorized for mini-potatoes and canner tomatoes.

In conjunction with the Livestock Services Branch, regulations for processed eggs were formulated.

## BRANCH PROGRAMS

The branch administered three major departmental programs in the 1989–90 fiscal year.

### School Milk Program

The School Milk Program continues to be well accepted by the schools, general public, and milk processors. The subsidy paid by the Nova Scotia Department of Agriculture and Marketing for the 1989–90 school year totalled $1.8 million, with 529 registered schools. The program has endured six Nova Scotia Dairy Commission price increases since the student price was raised in 1986.

### Live Market Hog Transportation Program

The Live Market Hog Transportation Policy assisted producers in defraying a portion of the transportation costs to market. In 1989–90 pork producers received $150,000 under the program, shipping 245,525 hogs.

### Marketing Assistance Program (M.A.P.)

The Marketing Assistance Program assisted commodity associations and marketing boards with their market development and promotional programs. Twenty-two organizations received $120,000 in funding.

## LIVESTOCK MARKET DEVELOPMENT

Specific market assessments and profiles were undertaken for industry and other agencies. These included profiles on: non-traditional poultry and game, dairy goat milk, Nova Scotia agri-food exports, organic foods, fish offal supplies for the fur industry, chicken supplies and pricing, livestock sale facilities, and new product developments.

The branch continued to provide an advertisement tracing service on red meat and poultry features. The fourth annual live swine administrative review was completed. A price and volume chart series was released quarterly with a 1989 annual summary.

Work trips included the National Foods Expo East, Philadelphia; Meat Processing Technical Mission, Germany; 1990 Beef Development Seminar, Saskatoon; 7th Canadian Meat Council, Toronto; Canadian Livestock Market Information Advisory committee, Toronto; and the Canadian Fur Sale, Toronto.

## FRUIT AND VEGETABLE MARKET DEVELOPMENT

The Kentville office continues to expand its marketing advisory services to the various sectors of the province's horticulture industry, with particular emphasis on the major wild blueberry, tree fruit, and vegetable sectors. Most program activities are directed through the various commodity organizations, although there was increasing demand for more sophisticated marketing advisory services to individual growers and marketing organizations.

In the area of professional development and upgrading, staff enhanced their knowledge of post-harvest handling of fresh produce by attending the Post-Harvest Technology Short Course at the University of California, Davis, in June 1989.

### Direct Marketing

Sales in the province's 141 direct market facilities was estimated to be worth $12 million in 1988.

The Direct Marketing Challenges '90 Conference was held in Halifax on March 25–27 and was attended by approximately 115 marketers.

### Foodservice

A primary objective of the foodservice program was to increase awareness and consumption of Nova Scotia agri-food within the "away from home" or restaurant market.

Education and awareness were provided through various publications, photography and food styling work, and foodservice publications. These included: *Food for Thought—A Buyers' Guide*, second edition, 1989; *Lambtastic—Discover N.S. Lamb*, recipes for foodservice; agri-food photography; Acadian Days Pork Festival; strawberry and blueberry promotions; Nova Scotia Food Night; "Meat Me For Lunch", Meat Month promotion; Maple Magic Week-end *Winning Ways with Eggs*; APEX, 1990; "Taste of Nova Scotia."

### Taste of Nova Scotia

In May 1987, the Department of Agriculture and Marketing and the Department of Fisheries initiated discussions with the Department of Tourism and Culture regarding a coordinate food program targeted to the foodservice industry. In late May 1988, the Government of Nova Scotia approved the establishment of the "Taste of Nova Scotia" program.

Summer 1989 was the charter membership year, and the focus was to feature and promote member foodservice establishments that met specific service, hospitality and menu guidelines. A government/industry council of eight members and a program manager were responsible for ensuring program credibility and effectiveness through inspections, local food product quality control, and education program components.

The 61 foodservice "Taste of Nova Scotia" members received marketing consultation, menu development activities, newsletters, guidebook, point-of-sale materials, source of supply information, government marketing, and promotional activities. In return, members adhered to a rigorous set of standards and a commitment to use local products.

**PROMOTIONS**

Promotional and advertising activities are an integral part of domestic and export market developments. The development of a trade calendar helped coordinate agricultural trade activities with other departments.

Commodity highlights for the 1989-90 season included a new potato season kick-off and luncheon, a potato media tour, the formation of a maple cooperative, fresh and frozen blueberry promotions in retail outlets in Halifax and Boston, and Nova Scotia lamb, pork, and rabbit identification programs.

Highlights of consumer and trade shows, exhibitions included the first Garden & Patio Show 1989, Apex '90, NASDA '89 and Swing into Spring '89 and '90, the Cape Breton Food Festival, the Atlantic Winter Fair, the Newfoundland Food and Livestock Show, and the annual Canadian Food Wholesales Association meeting. A new endeavour was "Harvest Food Fest '89," which attracted 6,000 visitors and some 30 exhibitors to an all-agricultural commodity event. The Minister and staff hosted agri-food entrepreneurs and their clients aboard a Boston *Bluenose II* sailing in September 1989. Six agri-food firms participated on a New Exporters to Border States (NEBS) program and attended the Boston Solo Food Show.

New for 1989 was a four-month consumer taste program whereby two summer students, located at various high traffic areas throughout the province, offered Nova Scotia agri-food product samples to the public and directed consumers to the source.

## AFDA MARKET DEVELOPMENT PROGRAM

Since the beginning of the Canada/Nova Scotia Agri-Food Development Agreement in 1988, the Market Development Program has implemented special studies, developed marketing information systems, provided marketing infrastructure, assisted product development, and encouraged marketing organizations. Two branch members serve on the Implementation Committee, and every branch member has been involved in one or more of the 113 projects initiated to April 1990. Funds committed to that date were $2,271,000.

## EXPORT AND INTERNATIONAL RELATIONS

As part of its relationship with other provinces, departments, and the international community, the branch participated in a number of committees and meetings. These included the Nova Scotia Trade Development Authority, the Federal/Provincial Market Development Council, the Federal/Provincial Trade Policy Committee, the Wild Blueberry Association of North America, and the National (U.S.) Agricultural Marketing Organization. Various contacts and meetings were held with Agriculture Canada and the Department External Affairs on matters of trade.

## AUDIO-VISUAL SERVICES

The Audio-Visual Services Section is utilized by both the branch and the department for their educational requirements.

Demand for studio and location photography remained high. Demand on the slide library included 32 requests and 417 slides.

The major video release of the year was *Nova Scotia's Festival of Foods*, an eight-minute show highlighting the province's food heritage that was shown at festival and community events. The subjects of other completed or ongoing video projects include a mechanical strawberry harvester, the sheep industry, strawberry nurseries, Nova Scotia dykelands, and Field Crops Expo '90.

Total assignments for visual aids through graphic design exceeded 1,905. Highlights were promotional material for trade shows such as APEX, Swing Into Spring, the Maritime Pork Conference, the Garden &

Patio Show, and Harvest Food Fest '89, ad designs to various newspapers, agricultural publishers, a logo design for Nova Scotia Agriculture, Armstrong Select Nova Scotia Beef, Canadian 4-H, and various brochure designs and foodservice promotions mentioned elsewhere.

A total of 1,078 tapes were distributed to radio stations in 1989-90. These were produced from 448 different recording sessions:

Nova Scotia Garden Guide series—144

Nova Scotia Agricultural & Marketing Update—109

Home economists—52

4-H representatives—52

Agricultural representatives—52

Miscellaneous—22

Trees & People—17

This has been the 12th year for the *Garden Guide* series. The year 1990 marked the first year for the *Trees & People* series, a cooperative arrangement between the Nova Scotia Department of Agriculture and Marketing and the Canadian Forestry Services.

While maintaining audio-visual equipment for department and College staff, there were 925 equipment loans in the year, ranging from cameras to overhead screens to sound equipment.

## HORTICULTURE AND BIOLOGY BRANCH

### OVERVIEW

The Horticulture and Biology Branch provides leadership and an advisory service to the horticultural industry on complex scientific techniques of commercial food and ornamental crop production. Horticultural specialists in the branch are assigned to the following commodity areas:

| | |
|---|---|
| Tree fruits | Ornamentals |
| Berry crops | Maple |
| Vegetables | Lowbush blueberries |
| Greenhouse operations | Home gardens |

The Biology section of the branch provides service in the following areas:

Apiculture
Entomology
Plant pathology

Specialist services to the horticultural industry include management consultation and identification and control recommendations for insects and diseases.

The administration of development incentive programs is also provided by the Horticulture and Biology Branch. Interaction between specialists and their respective provincial commodity associations provides excellent direction for effective horticulture extension activities.

### APICULTURE

The number of beekeepers in Nova Scotia did not change in 1989 (370). There is a cautious mood of expansionism in the province, and this is reflected in a small increase in the number of colonies. Several younger beekeepers have expressed a desire to become commercial operators, but they are waiting to see what develops with regard to the parasite mite situation in North America and, particularly, in Nova Scotia.

The 1989 honey crop is estimated at 190 tonnes, with a value of $572,400. This does not include the value of pollination services to other industries.

The introduction of parasitic mites of honeybees into the U.S. resulted in the closure in 1985 of the Canadian border to all bee imports except from New Zealand and Australia. Cost and occasional quality problems with New Zealand and Australian package bees discouraged the continuation of the traditional method of managing bees—that is, killing bees in fall and restocking with packages in spring. Therefore, essentially all beekeepers in Nova Scotia currently overwinter their bees. Overwintering reduces the need to import bees and can, therefore, help prevent the introduction of parasitic mites. Overwintering also allows beekeepers to maintain acclimatized bees that produce stronger pollinating units.

One full-time, seasonal bee inspector filed 165 apiary inspection reports in 1989, which covered every county of Nova Scotia except Guysborough and Richmond. Inspections were for the detection of honeybee diseases and the honeybee tracheal mite (HBTM), *Acarapis woodi*. The inspected apiaries contained a total of 2,008 hives (33.5 per cent of the estimated number of colonies in Nova Scotia). One HBTM sample, consisting of approximately 500 bees, was collected from each apiary (165 samples in all), while 639 hives, 32 per cent of the 2,008, were inspected individually for disease. Basically, diseases were found at normal levels of occurrence, and all completed HBTM samples were negative.

## APPLE MAGGOT CONTROL

The Annual Fall Survey was carried out in cooperation with the Food Production and Inspection Branch of Agriculture Canada during August and September. The survey took four weeks to complete with 10 inspectors: 6 inspectors were employed by the Apple Maggot Control Board, 1 inspector was jointly employed by the province and the Nova Scotia Fruit Growers' Association, and 3 inspectors were employed by Agriculture Canada. During this time, 1,103 inspections were completed: 655 commercial blocks and 448 contacts. The infestation rate of commercial blocks was 32.7 per cent, which was considerably higher than in previous years (1988—18.7 per cent). Infestations in contact blocks were 46.2 per cent, which was higher than in previous years (1988—28.1 per cent).

## BERRY CROPS

### Strawberries

The 1989 Nova Scotia strawberry industry was valued at $5,416,015, down $265,765 from the 1988 value.

The 1989 Nova Scotia strawberry crop was considered average, with total harvested production at four million quarts. Picking acreage was estimated at 700 acres, the same as is the previous year. A few growers reported yields as "best ever," while other growers had average and a few below expectations.

The amount of fruit sent to processing, 112,500 quarts, is down considerably from the 1988 volume of 457,800 quarts. The Nova Scotia weighted average wholesale selling price in 1989 was $1.57/qt. compared to $1.54/qt. in 1988, but below $1.72/qt. in 1987.

The Nova Scotia certified strawberry nursery industry has made increased sales, from 6.1 million plants in 1979 to 23.6 million plants in 1989, with a present value of $1.4 million. Of the 1989 sales, 93.7 per cent was exported out of Nova Scotia. Nursery sales to Nova Scotia strawberry growers were steady at 1.5 million plants.

### Highbush Blueberries

The 1989 highbush blueberry crop was estimated at 290,000 pints, down 300,000 pints from 1988, and still below the former average production of 430,000. Production is valued at $406,000.

The lower production resulted from a slightly lower fruit set than expected. This is attributed to the plants' still recovering from the winter injury of 1986–87, and, to a greater extent, to excessive winds from Hurricane Hugo of September 16.

### Raspberry

There are estimated to be 40 acres of raspberries in production in Nova Scotia. Earlier estimated production figures of 141,000 pints for Nova Scotia may have been on the low scale. Revised estimates of low yields of 4,000 pints/ac. on 40 acres would equate to 160,000 pints. Production in 1989 was valued at $208,000.

As new plantings come into production, more raspberries are being sold at roadside stands and supermarkets. U-Pick prices range from $.90 to $1.10/pt. and fresh market returns from $1.50 to $1.75/pt.

**Cranberry**

The 1989 cranberry crop was estimated at 450,000 pounds, similar to the 1988 crop. The Halifax wholesale paying price was $18.00 to $21.00 (24 x 12 oz.), unchanged from 1989.

Nova Scotia has four active cranberry bogs with approximately 40 acres. There is considerable interest in new cranberry development in various areas throughout Nova Scotia.

**Grape**

Nova Scotia has 37 grape growers in seven counties with 149.89 acres under management. In 1989, 9.98 new acres were planted and 66.19 acres were removed or abandoned, resulting in 149.89 for grape production. Grape production in 1989 was estimated at 130 tons.

The reduction in vineyard acreage in 1989 was the result of vineyard restructuring, removal of undesirable cultivars, and a number of growers with test cultivars assuming other interests.

Nova Scotia had an ideal grape growing season with exceptional growing conditions from May to October. The Nova Scotia vineyards had a potential of 165 tons. The crop reduction was caused by birds, deer, raccoons, excess mildew, and low brix level. Improved cultural management in some vineyards would have improved the mildew and brix level. A few small growers had their entire crop destroyed by birds; another grower had his crop destroyed by raccoons.

**Lowbush Blueberry**

The 1989 lowbush blueberry production was estimated at 16,831,560 lbs. (7 586 351 kg). The five-year average production (1985–1989) is 17,504,956 lbs. (7 940 248 kg). Acreage was estimated at 26,000 acres (10 530 ha) in 1989, with there being approximately 1,000 growers.

The 1989 field price for lowbush blueberries was 55 ¢/lb., for a farm gate value of $9,257,358. The total value to the provincial economy (assuming a multiplier of 3) is then $27,772,074. The five-year average grower price (1985–1989) is 48 ¢/lb.

Processors were able to successfully move most of the 1989 processed crop by early in 1990. However, strong competition from other fruit crops, including highbush blueberries, presents a continual marketing challenge. The present total blueberry market worldwide will comfortably absorb about 170,000,000 lbs. (combined highbush and lowbush production). Production has been at this level for the past two years. Any sudden upsurge in production beyond this figure could cause serious marketing problems.

Growers have moved rapidly to the use of flail mowers for pruning and mechanical harvesters for harvesting. The use of these two machines cuts production costs dramatically and eliminates much of the seasonal pressure on both pruning and harvesting operations. Because of these advantages, there is a strong interest in levelling and smoothing of blueberry land to facilitate the use of flail mowers and harvesters. Some growers are levelling acreage with discs and heavy rollers, and others are using heavy rollers alone. Several research studies have been initiated to assess these land-levelling techniques and their effects on production.

## GREENHOUSE INDUSTRY

There were 85 greenhouse operations in Nova scotia during 1989 with total sales in excess of $34 million.

Nova Scotia greenhouse industry sales continued to be strong in 1989. There was an appreciable increase in the production of bedding plants, whilst the greenhouse vegetable crops, cut flowers, and potted plants all recorded good production levels. Prices remained stable throughout the year.

Bedding plant production increased again in 1989, partly as a result of new greenhouse area but also owning to improved technology. The sales season was good, with excellent early and late sales.

The 1989 greenhouse vegetable crop was not affected to any great extent by large-scale imports from other provinces. The cucumber production from the Sprung greenhouse in Newfoundland never reached its projected levels, and production at the facility ceased late in the year. However, a number of large-scale projects were built during the year, particularly in Quebec, and over-production at certain periods may be a problem in the future.

There were several noteworthy developments in Nova Scotia during 1989. These included an expansion of the area using the rockwool hydroponic system; a new greenhouse production unit in Cape Breton using an overhead radiant heating system; and interest in producing small cherry tomatoes for the local market.

## MAPLE

The maple season was fair in 1989. Some areas reported good yields. However, in other areas, production was poor. There was a total of 249,270 taps among 73 producers producing 19,950 gallons (90 695 L) of pure maple syrup.

The yield per tap in 1989 was down 15 per cent from the yields in 1988 and below the average yield for the past 16 years. The sugar content of the raw sap was fairly high. Quality of products made was good overall. Sap from 5.5 per cent of the taps in the province was collected in buckets. The remaining 94.5 per cent of the taps were part of plastic tubing systems.

## LANDSCAPE/SOD/ORNAMENTALS

The industry slowed down for the first time since 1982 in the late summer of 1989. This industry has been increasing about 10 per cent per year. Many firms closed up shop for the season early (October), while the normal trend has been to continue into December or until freeze-up.

Sod growing rebounded from a shortage of sod the previous season to a general expansion by most growers. Several new growers got into the business.

Landscape maintenance had its usual good year. Landscape construction was good during the spring and early summer but slackened drastically by late July.

The lawn service sector did reasonably well, although increasing regulations reduced profit. Ornamental nurseries expanded and had a reasonably good season and are cutting into the imports from Ontario.

The estimated value of the industry, as a whole, in 1989 was $19,800,000. There was a total of 3,500 acres of sod in production and

1,500 acres cut in 1989 for a value in excess of $6 million. There were 20 sod growers.

In total, there were 56 landscape contractors, 13 landscape maintenance operations, 20 ornamental nurseries in production, 54 miscellaneous ornamental sales outlets, 36 garden centres, 8 arborists, and 10 lawn service establishments.

Organized groups (garden clubs, horticultural societies) remained relatively stable during the year. Two groups disbanded and three new groups were formed.

Telephone information lines at Kentville and Truro handled the average number of calls, down from the 5,000 plus calls in 1988. Cultural requests by correspondence remained the same as last year. Office consultations also remained the same.

Rural Beautification continued its program under the guidance of the Rural Beautification Committee. Entrants in the contest were up over 400, and there was widespread interest in the program.

Annapolis Royal Historic Gardens continued its development. Attendance at the gardens appears to have levelled off at approximately 30,000 people per year. Excellent progress in debt reduction has been accomplished.

**TREE FRUITS**

The 1989 crop year will be remembered more for the small apple crop produced following the large crop of 1988 than for other changes that took place within the industry. Fruit trees overwintered well without any significant winter injury as indicated by a good stone fruit bloom and crop in 1989.

The 1989 apple crop was estimated to be 2,300,000 bushels, which would be 45 per cent smaller than the 1988 crop of 4,200,000 bushels. The pear crop was estimated to be 50,000 bushels, down 55 per cent from the 1988 crop of 94,000 bushels. The plum crop was estimated to be 6,500 bushels, up 18 per cent from the 1988 crop of 5,500 bushels. The peach and cherry crops were better than average in 1989. The farm gate value of the 1988 apple crop was $11,758,000 ($2.80/bu), while that for pears was $747,000 ($8.30/bu.), and for plums was $116,000

($21.09/bu.). The total farm gate value of the 1988 tree fruit crops would be in excess of $12,621,900, which compares to a value of $11,903,303 for 1987.

The early market season for fresh fruit sales saw wholesale-to-retail quotes up $1.80 to $2.00 per box over those quoted for 1988. While fresh fruit prices were higher, growers received 25¢/cwt less for juice apples and $1.25/cwt less for peeler apples compared to 1988. The 1988 Apple Enterprise Study, placed the average return to the grower at $2.98/bu. and production costs at $3.29/bu., for a net return of -31¢/bu. This compares to a net loss of $2.01/bu. for 1987.

**Pear and Stone Fruit**

Pear and stone fruit trees overwintered well, and there was no apparent winter damage or spring frost injury to pear, plum, and cherry trees in 1989. Warm May temperatures resulted in rapid bud development with stone fruit and pear bloom being observed during the week of May 14–21. A good bloom was observed on these tree fruits, and weather conditions during bloom were well suited for cross-pollination and fruit set. Warm weather and adequate moisture throughout much of the growing season promoted good fruit growth, and no major insect or disease problems were reported for these tree fruits.

The pear set was good in most orchards, with the exception of one orchard of significant acreage where the set was very poor on those trees that were not pruned in 1989. The quality of this year's pear crop in terms of size, colour, and finish was considered to be good and improved over that of 1988. Fruit size was generally larger than that of 1988 owing to growing conditions and a better regulation of cropload on the trees through chemical and hand thinning.

The preliminary crop estimate for the 1989 pear crop was set at 50,000 bushels, down 55 per cent from the 1988 crop of 90,000 bushels. A major portion in the decline of this year's crop resulted from the removal of Cobi Foods pear orchards. The average, return for the 1988 pear crop was $8.31/bu. compared to a return of $9.45/bu. for 1987. The farm gate value for pears in 1988 was $747,900.

## VEGETABLES

The acreage for vegetable production was 12,120 acres, a decrease of 165 acres from 1988; the value of production was at least $16.9 million dollars at the farm gate (an increase of $1.6 million from 1988) from a marketable production of 180 million pounds (an increase of 2 million pounds of marketed vegetable crop).

Crop yields were generally high and all excellent quality.Potato yields again increased, setting another record year (230 cwt/ac.). Part of the yield increases were due to irrigation, since the month of August was quite dry and rains did not come until mid-September. This dry period threw off the scheduling of many crops that were not irrigated and resulted in a low amount of product harvested. When rains did come, there was heavy competition in the North American market (particularly in cabbage). Carrot yields for fresh and processing crops were generally high after late September. A record amount of processing carrots was processed this year. An exceptionally warm May and June speeded many of the early crops to maturing in late June and early July. Cabbage and potatoes were 10 days to two weeks ahead of schedule, and yields were excellent, setting a record amount of produce harvested from late June to the end of July.

## BULK BIN POLICY

The Bulk Bin Construction Assistance Policy is administered by the Plant Industry Branch. The assistance under the policy allows fruit and vegetable growers to construct up to 200 bins at $10.00 per bin—a maximum of $2,000.00 (the minimum number of bins eligible is 25). The bins are inspected and coded according to codes used under previous policies—each farm having its own code.

The total money allocated under this policy is $85,000, of which $66,300 was spent this year. A total of 83 applications were processed, of which 49 were for tree fruits and 34 for vegetables. Only 66 growers submitted claims (43 tree fruit growers and 23 vegetable growers); 17 growers did not build bins. A total of 6,632 bins were constructed.

**Bulk Bin Policy Summary**

| County | Growers | Bins | Tree Fruit | Vegetable |
|---|---|---|---|---|
| Kings | 59 | 5,717 | 3,960 | 1,755 |
| Annapolis | 2 | 225 | 225 | — |
| Hants | 1 | 200 | 200 | — |
| Cape Breton | 2 | 265 | — | 265 |
| Lunenburg | 2 | 225 | 30 | 195 |
| | **66** | **6,632** | **4,415** | **2,215** |

## EXTENSION SERVICES BRANCH

### OVERVIEW

The role of the Extension Services Branch is to provide agricultural education, information, and services to farmers and to the rural community in general. The branch reaches a large number of people through programs and organizations such as Women's Institutes, 4–H Clubs, Federations of Agriculture, fairs and exhibitions, Soils and Crops Association workshops, short courses, and other agricultural awareness activities.

### AGRICULTURAL REPRESENTATIVES AND SPECIAL PROJECTS OFFICERS

The objective of the agricultural representatives and special project officers is to provide a co-operatively planned extension education program and advisory service to Nova Scotia farmers, farm organizations, and others involved in the agricultural industry. Agricultural Representatives provide a "first point contact" to rural clientele on matters relating to livestock, crops, soils, farm management, farm loans, and rural development.

In 1989, 36 staff members operated 14 county offices in rural Nova Scotia. The agricultural representatives made over 5,000 farm visits and received over 10,000 office visits.

Special project officers were involved in policy administration, the Nova Scotia Farm and Country Vacation program, the World Food Day program, the Young Farmers Conference, the Nova Scotia Farm Health and Safety Committee, and the agricultural awareness and home study projects.

The Comprehensive Farm Development Program has been implemented on smaller farms. This program was introduced under the Canada/Nova Scotia Agri-Food Development Agreement (AFDA).

## FARM MANAGEMENT

The objective of the Farm Management Division is to assist Nova Scotia farmers, farm leaders, and fellow staff members to develop their business management knowledge and skills. This objective was pursued in 1989 through four specific goals: (1) to provide individual farm management counselling to farmers; (2) to provide formal training in farm business management; (3) to provide a base of economic data relative to Nova Scotia farm businesses; (4) to provide economic and farm management expertise to various organizations, committees, etc., as needed.

### Farm Counselling

In 1989, individual counselling of farm clients remained a very high priority. A breakdown of the purpose of these calls is as follows:

| | |
|---|---|
| Record system and analysis | 229 |
| Pre-loan counselling | 146 |
| Financial management and analysis | 128 |
| Business agreements and tax management | 146 |
| General farm management | 151 |

It should be noted that of the 800 clients who had a direct contact with staff of this division, 250 were referred by other professionals. A total of 172 budgets were prepared as a result of these calls.

### Education Programs

One of the key roles of the Farm Management Division is to enhance the business management knowledge and skills of clients. This refers to group training activities where information is relayed from the staff to clients . A total of 927 people attended the 60 training sessions offered in 1989.

### Management Information Programs

The need for up-to-date, reliable management information related to costs, returns, and production co-efficients has been increasing over the past number of years.

In 1989, eight commodity business summaries were completed and published. Farm Management fact sheets were updated or newly prepared for a manual.

The division is still involved with CanFarm, a computerized farm accounting system.

## 4–H AND RURAL YOUTH

The national theme "4–H Looks Good on You" was displayed at all 4–H events is 1989. A new program highlight was the Provincial Calfvention, a project-specific workshop for calf club leaders and members. 4–H membership showed a slight decrease in 1989. However, the percentage of completed projects increased.

### Nova Scotia 4–H Council

Volunteer direction is given to the Nova Scotia 4–H program by the Nova Scotia 4–H Council. Under the leadership of Hob MacLeod of South Bar, Cape Breton Co., the council met six times during the year. The annual meeting in November included a two-hour training session.

The council's largest fund-raising project in 1989 was the donation of $5,000 to the Island of Montserrat to aid in rebuilding from Hurricane Hugo.

### Nova Scotia 4–H Weekend

Three hundred and eighty 4–H members and leaders gathered at the Nova Scotia Agricultural College from May 5 to 7 for the Nova Scotia 4–H weekend. Provincial competitions were held in public speaking, demonstrations, square dancing, host and hostess, woodsman, posters, and decals categories during the weekend. The highlight was 4–H Night held at the Cobequid Educational Centre with over 800 people in attendance.

The 1989 4–H Host and Hostess selected were Lewis MacKinnon and Lynn Mattie from the Eastern Region.

### Nova Scotia 4–H Show

The 12th annual 4–H Show was hosted by Pictou County at their Exhibition Grounds under the co-chairmanship of Rita Post and Mark Firminger. Over 7,000 people attended this showcase of champion 4–H projects and competitions from across the province. Colchester–East Hants won the flag for top county in 1989.

The 4–H Market Steer and Lamb Show 'N Sale was held in conjunction with the 4–H Show. A committee chaired by Gary Burley saw 15 lambs realize an average price of $2.65/lb., while 15 steers averaged $1.70/lb.

**Other 4–H Programs**

Camp Rankin was once again at full enrollment for one week of Intermediate Camp and four weeks of Junior Camp. This program was given excellent direction by Marlene MacMillan.

**4–H Statistics**

In 1989, 2,696 4–H members wee enrolled in 125 multi-project clubs. The average age of the 1,606 girls and 1,090 boys was 12.1 years. The clubs were managed by 963 adult leaders, and in 1989, 4,070 projects were completed, for a completion rate of 87.8 per cent.

The projects consisted of 1,401 homemaking, 1,475 livestock, 168 horticulture, and 1,033 others such as woodworking, outdoorsman, photography, etc.

## HOME ECONOMICS

The Home Economics Division is actively involved in the development and implementation of programs that promote the consumption of Nova Scotia food products.

The division also plays an important role in leadership and personal development initiatives through organizations such as 4–H Women's Institutes, and various farm and commodity groups.

**Food Education/Agricultural Awareness**

The Home Economics extension program has a very important dimension—food education, and the department's home economists are out there telling the story about our Nova Scotia products and their uses.

The Cape Breton team coordinated a "Food Fabulous Show" where 350 people were entertained with comic theatre performances and Nova Scotia demonstrations.

Other new programs included a hands-on garnishing workshop to teach people to use Nova Scotia foods creatively; a Food Festival in Truro to promote Nova Scotia products; and projects using Nova Scotia vegetables in unusual ways, among others.

The *Food Products and Nutrition* binders are in every school in Nova Scotia with a home economics department. They provide information on Nova Scotia products and ideas on how to use them in the classroom. As well, teachers are provided with Nova Scotia commodity coupons to a value of $75 that they can use towards the purchase of food for their classes.

A major project, in co-operation with the Atlantic Winter Fair and the Nova Scotia Agricultural Awareness Committee, was the "Farming Is Awesome" exhibit, which was visited by 6,200 children.

**Women's Institutes**

Membership in the Women's Institute dropped by 131 this year. This dramatic decline has prompted the formation of recruitment committees, which work with home economists at the local level.

Kathy Hagen was appointed the new Executive Director for Women's Institutes in December 1989. Norma Mosher retired from that position after 20 years of dedicated service.

The Farm Women's Committee coordinated this year's Farm Health and Safety Competition in co-operation with the Farm Health and Safety Committee.

**Farm Women's Conference**

The 10th Farm Women's Conference was held with 85 delegates in attendance. This conference was jointly organized by Women's Institutes, farm women, a Nova Scotia Federation of Agriculture representative, and the Home Economics Section.

**4-H Homemaking**

The 4-H dimension to the Home Economics Section work continues to be a demanding yet rewarding job.

The Home Economics Section is striving to have all project materials on computer to enable faster editing. In 1989 and early 1990, the

*Homemaking Guide, Milk Manual, Crafts Newsletter,* and *Heritage* Level 1 and 2 were revised. A new *Heritage,* five advanced foods projects, and a *Cake Decorating Manual* were released.

## EXTENSION AGRICULTURAL ENGINEERING

The work of the Extension Agricultural Engineering Division involves the provision of technical support services to assist farmers and the agricultural industry in the construction of capital works.

The work of the division is reported under five program areas: Land Development, Farm Mechanization, Crop Processing, Land Protection, and Farm Buildings.

### Land Development

This program covers the provision of technical and design services with respect to drainage, land clearing, land forming, farm pond construction, dykeland roads, and all forms of irrigation.

Effort is also directed toward the implementation of the Land Improvement Policy.

Professional staff made 380 farm calls, technical staff made 241 calls, and inspection staff made 1,643 farm calls to facilitate land improvements. The major drainage research project in Cumberland County is ongoing.

A statistical summary of the work is as follows:

| | |
|---|---|
| Number of applications approved | 1,032 |
| Number of applications rejected | 29 |
| Total value of applications approved | $9,182,214 |
| Grant value of applications approved | $6,886,660 |

Land Improvement statistics are as follows:

| Category | Units of Work Completed |
|---|---|
| Land clearing | 2,275 acres |
| Window removal | 62,027 feet |
| Apple tree removal | 11,988 trees |
| Underdrainage | 3,950,000 feet |
| Surface ditching | 580,750 feet |
| Ditch spoil levelling | 300,665 feet |
| Land forming | 822 acres |
| Roads on dykelands | 28,510 feet |
| Land levelling | 564 acres |
| Land clearing—blueberry | 259 acres |
| Firebreak construction | 96,969 feet |

**Land Protection**

This area includes programs related to the operation and maintenance of 150 miles of dykeland and 278 aboiteau structures. Also included are flood control structures for the Musquodoboit River and Brierly Brook. This work under the Main Outlet Drainage Policy also falls under this section of the program. The statistical summary is as follows:

| | | |
|---|---|---|
| Aboiteaux repaired | 9 | |
| New aboiteaux constructed | 3 | |
| Main outlet drainage ditches excavated | 135, 960 | feet |
| Land forming surveys | 881 | acres |
| Ditching surveys | 381,775 | feet |
| Rock protection dykes | 60,991 | tons |
| Dyke profile surveys | 550,854 | feet |

The majority of aboiteaux were constructed during the 1950's and show their wear and deterioration. An ongoing program of repair and replacement is being accelerated.

**Crop Processing and Energy**

This aspect of the work involves engineering input into several areas of agriculture, which include: Provincial Grain Commission, On-Farm Grain—Feed Facilities, Registered Fruit and Vegetable Storages.

Expansion and renovations continued at the three Provincial Grain Centres. Five additional storage bins were erected at Steam Mill and two at Middleton, each with a capacity of 11,000 bushels. The handling, control systems, and accessory equipment associated with each were put in place.

**Farm Structures**

A very important segment of the Extension Engineering work is the provision of engineering counsel and technical planning and assistance for farm structures. Structures include livestock buildings, crop storages, manure storages, machinery buildings, and other miscellaneous structures. A summary of the structure engineering work is as follows:

| | |
|---|---|
| New plan sets prepared | 158 |
| Number of plan sets distributed | 2,770 |
| Number of plan sheets distributed | 5,000 |
| Number of farm structure calls | 726 |

Engineers spent considerable time in studying deterioration in upright concrete silos to determine the need for maintenance and repairs.

In 1989, 131 applications for manure storages were handled by the engineers under this newly established program. Custom plan sets prepared by staff engineers are as follows:

| | |
|---|---|
| Beef | 40 |
| Dairy | 19 |
| Swine | 13 |
| Fruit and vegetable | 13 |
| Grain, forage | 12 |
| Building engineering | 7 |
| Poultry | 7 |
| Miscellaneous | 51 |

**Farm Power and Machinery**

The area of farm mechanization continues to be a segment of the industry that is experiencing very rapid change. To compete in today's agricultural industry, the producer must be able to steadily increase production and provide a better quality product with little increase in cost to the consumer.

This segment of the work is handled with one staff engineer and one engineering technician with assistance from other technical support staff as required.

Following is a list of machinery introduction, evaluation and demonstrations that were supported through various projects. These events range from half-day programs to programs that were continuously monitored and evaluated throughout the year.

Corn harvester
Sub-soiler evaluation
Strawberry harvesting mechanization
Hay compactor design and evaluation
Forage system evaluation
Evaluation of land levelling in blueberries
Lettuce transplanting
Big bale handling systems
Cultivator design and construction
Expo '90
Tube-o-later

Short courses were held on the following topics:

Safety Course
Development of Mechanization for the Strawberry Industry
Proper Pesticide Application (blueberries)
Custom Machinery Operation (cereal production)
Blueberry Land Levelling Methods

Field days included demonstrations of a vegetable transplanter and of a strawberry harvester and four plowing demonstrations.

Thirty-five individual farm calls were made by engineers on various mechanization projects. There were over 150 calls made by the technician. In the spray check program over 140 units were evaluated and calibrated throughout the year.

The Atlantic Farm Mechanization Show was held during the week of February 20, 1989. The show had over 100 exhibits with a wide range of new equipment on display.

## SOILS AND CROPS BRANCH

### OVERVIEW

The Soils and Crops Branch is responsible for the following areas:

- Crop extension activities for all cereal and forage crops grown in Nova Scotia, which are utilized either as human or animal feeds, and tobacco.
- Weed expertise for all crops and the administration of the Weed Control Act.
- Soils expertise, including soil survey, to serve all branches of the Department of Agriculture and Marketing and other departments of government, i.e. the Departments of Health and Fitness, Lands and Forests, and the Environment.
- Establishment of coordinated criteria for land use planning as affected by the Nova Scotia Department of Agriculture and Marketing and other industries and departments of government.
- Analytical laboratory services, which serves all professional staff of the Nova Scotia Department of Agriculture and Marketing, all farmers market gardeners, greenhouse operators and homeowners with chemical analysis of soil, water, plant foliar, and livestock feed samples. Soil physical and pesticide residue analysis service is also available.

### THE SEASON

Extremely warm weather conditions throughout the month of May allowed many locations to break records for the warmest May in their history. The warmest spot in the province was Greenwood at 14.6°C, which is approximately 4°C above the 30-year normal and 1°C above the old record May temperature set in 1960. Precipitation totals for the month were extremely variable throughout the province and ranged from lows of around 20 mm in Cape Breton and 50 mm in some parts of the Annapolis Valley up to totals of well over 150 mm in Central Nova Scotia.

Although the trend of record-breaking May temperatures did not continue into the month of June, growing conditions were still quite favourable. Average temperatures for the month were about 1°C above normal and approximately 2°C warmer than June of 1988.

Hours of bright sunshine were about the same as that point in the growing season last year and around 7 per cent below average. Precipitation totals for the month of June were quite uniform and for the season to that point were approximately 30 per cent above average in Central Nova Scotia, 10 per cent above normal in the Annapolis Valley, and 25 per cent below normal in Cape Breton.

July brought slightly below-normal temperatures. Heat unit totals for the month were about 6 per cent below average but were still between a week to 10 days ahead of the amount normally accumulated to that point in the growing season.

Although many parts of Central Nova Scotia continued to receive sufficient moisture throughout July and August, some areas in the Annapolis Valley, the North Shore, South Western Nova Scotia, and Cape breton received little precipitation between early July and September. Most of the driest spots received less than 30 per cent of normal precipitation during that time period.

Temperatures for both August and September were about 1°C above normal, which, in turn, brought heat units for the season around two weeks ahead of normal pace. Hours of bright sunshine were 5 per cent above the totals for the 1988 growing season.

## CEREAL CROPS

Winter wheat acreage stabilized in 1988 and dropped slightly from the previous years plantings, mainly because of lower milling grain prices. Winter wheat survived the winter well and generally had good growing conditions. harvest conditions were excellent with grain of generally good quality being harvested.

Spring grains were planted in good time, mostly in the first two to three weeks of May. The spring grains also had excellent growing conditions resulting in above-average grain yields. Plantings of spring wheat for milling purposes dropped dramatically in 1989 as the price of milling wheat dropped and the price of feed grains strengthened.

Plantings of barley increased as well. There was a notable shift from milling spring wheat to feed spring wheat. Harvest conditions were also very favourable for spring grains.

**Nova Scotia Winter Grain Marketing Board**

The Nova Scotia Winter Grain Marketing Board changed its name in 1989 to the Nova Scotia Grain Marketing Board. The Nova Scotia Grain Marketing Board is a producer-operated board, which markets winter and spring grain as well as corn, soybean, and canola. The board also has the responsibility to market all the wheat grown in the Maritimes that is used for bread flour. In the past year, the Nova Scotia Grain Marketing Board has been active in industry meetings, research and development activities, and crop scouting, as well as marketing.

Pool volume for the 1988 crop was 17 280 tonnes. This was the highest volume the board has ever had and exceeded the 1987 level by 15 per cent. The number of producers pooling was 188 in 1988 and 160 to date this year.

The 1989 crop volume to date is 14 460 tonnes, down 16 per cent from last year's level. This reflects a small increase in feed grains and oilseeds and a sharp drop in spring milling wheat deliveries. Winter milling wheat increased marginally.

Overall quality of crops was very good this year. Quality problems that plagued the spring milling wheat in 1988 were all but absent this year. However, about 20 per cent of the winter wheat did encounter problems.

Feed grain quality was good to excellent in 1989. Most of the barley graded #1 and about half the oats graded #1 or #2, compared with only 25 per cent a year ago. Corn quality was only 25 per cent a year ago. Corn quality was excellent with large uniform kernels and a higher-than-usual percentage in the #1 grade category.

Oilseed quality was less consistent; as developing crops, both soybeans and canola encountered various problems. However, the respective roasting and pressing processes will not be materially affected by the grade.

The long-standing federal system of interest-free cash advances was replaced this year by an interest-bearing initial payment program. This is

the result of a cost-cutting measure included in the April 1989 federal budget. The removal of the interest-free feature came at a particularly bad time, since initial prices dropped significantly based on depressed cash and future values last summer.

Grain and oilseed prices are depressed by between 8 per cent and 30 per cent, compared with a year ago. The largest drops have occurred in milling wheat, soybeans, and oats.

Domestic wheat prices continue to remain at levels below those indicated by market fundamentals, although they are not far off the long-term historical average.

A pool summary for the 1989 crop year is contained in the table below:

**1989 Pool Summary — March 20, 1990**

| Pool | Tonnes In | Tonnes Sold | Average Market Price 1989 (to date) | 1983 (final) |
|---|---|---|---|---|
| Milling Wheat | | | | |
| Absolvent/ Monopol | 5,169 | 2,310 | $213.61 | $254.83 |
| Perlo | 508 | 238 | 215.73 | 261.87 |
| Karat | 246 | 57 | 215.73 | 260.10 |
| Max | 3,076 | 1,526 | 208.42 | 244.15 |
| Katepwa | 393 | 393 | 205.24 | 253.01 |
| Roblin | 144 | 144 | 205.24 | — |
| | **9,536** | **4,668** | **211.08** | **249.75** |
| Feed Wheat | 487 | 338 | 178.35 | 209.48 |
| Rye | 242 | 0 | — | 128.04 |
| Barley | 1,086 | 779 | 152.39 | 165.00 |
| Oats | 1,311 | 100 | 148.38 | 146.96 |
| Hulless Oats | 47 | 30 | 218.41 | 206.29 |
| Corn | 1,410 | 550 | 168.83 | 180.92 |
| Canola | 123 | 123 | 412.04 | 425.69 |
| Soybeans | 348 | 40 | 358.02 | 379.49 |
| **Totals** | **14,590** | **6,628** | | |

**Notes:**

1. 1988 final milling wheat prices include federal government subsidy of $26.87/tonne.

2. 1989 rye pool is just starting to be marketed, as 1988 pool was not closed until Feb. 23, 1990. The same applies to the 1989 oat pool.

3. Soybean tonnage includes both 1988 and 1989 crops.

4. Canola prices include ALFI assistance of $180/tonne for 1988 and $164/tonne for 1989.

## FORAGE CROPS

The winter and spring conditions of 1989 were relatively hard on alfalfa, orchardgrass, and perennial ryegrass stands. A thaw in many regions in January, in which a substantial amount of rain fell, was considered to be at least partially responsible for some of the winter injury. Ice encasement and low early spring temperatures were also believed to be responsible for some of the injury observed. However, above-normal temperatures and adequate moisture in May resulted in excellent growing conditions for forage crops. Grasses such as timothy and orchardgrass headed out approximately 10-14 days earlier than normal; therefore, when conditions permitted harvest, the protein was lower than normal. Farmers were reporting protein levels of two to three percentage points lower than forage harvested at similar times in other years.

The wilting conditions during the month of June varied considerably throughout the province. The central region faired quite nicely, although the weather forecasts constantly predicted rain. Certain areas in the eastern part of the province had great difficulty in achieving a timely harvest of the first hay crop. Many of those with haylage were finished by the third week of June. Generally, farmers reported yields of approximately 30-40 per cent above normal with some yields as high as 7.8 of dry matter (3.4 t./ac.) for the first crop.

Quality of the second cut was exceptionally high in many situations. Warm, dry wilting conditions may have at least partially contributed to this. Some legume hay entered in the provincial competition tested as high as 25 per cent crude protein and 69 per cent total digestible nutrients.

## PASTURES

Early season pasture growth was excellent, with yields in the range of 2.5 to 3.0 t D.M./ha (1.1 to 1.3 t./ac.) by the middle of May. Generally, livestock were let out during this period, but unfortunately, severe wastage occurred because of uncontrolled grazing in many situations. Native pasture growth declined more rapidly than normal this year, and many of those farmers who have utilized improved pasture species found their performance to be excellent despite the dry conditions. In fact, many claimed that they would not have had any pasture at all had it not been for species like orchardgrass, Ladino clover, meadow fescue, etc. Total season production was in the range of 8-10 t D.M./ha (3.5–4.4 t./ac.). Even so, the majority of farmers started feeding silage or hay in August to supplement their pastures to maintain rate of gain or milk production.

## OTHER CROPS

### Soybeans

For the most part, 1989 was a good year for growing soybeans. The amount of accumulated heat between May and September was well above normal, resulting in good yields and maturity. Generally, the conditions during harvesting were near ideal owing to dry conditions during the summer, which persisted well into the fall harvesting season. However, the lack of rainfall in July and August reduced yields on the lighter, sandy soils, especially in the Annapolis Valley.

Besides a few isolated cases, most growers had yields ranging from 2.0–2.75 t/ha (.9–1.2 t./ac.). A couple averaged 2.5 t/ha (1.1 t./ac.) on fairly substantial acreages. A few crop failures occurred due to poor weed control, sclerotinia problems, and severe herbicidal injury.

A substantial portion of the 1989 crop was marketed through the Nova Scotia Grain Marketing Board, although several growers utilized a portion or all of their soybeans on their own farms.

### Tobacco

Tobacco production continued its steady decline in 1989. Only 11 growers grew tobacco in the year, two less than the previous year, and down from 15 in 1987. These 11 growers grew 176 ha (442 acres) producing 287.944 kg (633,477 pounds) for a total value of $1,289,459.

## WEED CONTROL

Weed control in 1989 was quite predictable. The season was warmer than normal with above-normal precipitation during May and June. In a few instances, heavy rainfalls depleted residual herbicides allowing for some weed escapes. The heavy rain also caused some of these treatments to show greater-than-normal crop injury. Dry conditions from mid-July to mid-September also affected the performance of herbicides applied during this period. Temperatures through the first two and one-half weeks of November felt more like early September weather. This allowed for effective herbicide application late into the season. This was all ended very abruptly for the season when severe winter weather set in during the last 10 days of the month.

Operation Spraycheck, which is a sprayer calibration program, was available in the 1989 growing season. One hundred and thirty-seven sprayers were calibrated at 35 clinics from April to June. Operation Spraycheck was promoted at various Soil and Crop Improvement Association meetings and through radio interviews and articles in the *Farm Focus* and newsletters. The growers felt they better understood their spraying systems after getting their sprayers checked. There were some minor problems with calibration and knowing the correct nozzles and pressure to use depending upon the type of application the grower wanted.

### Weed Control Act

This legislation has been active in controlling many of the weeds that are detrimental or of concern. The legislation is designed mainly to protect agricultural lands but also provides legislation whereby poisonous weeds are subject to strict control measures.

The act encourages the appointment of various municipal weed inspectors. Lunenburg Council has discussed the matter and has confirmed an appointment for 1989.

Total costs for this year amounted to approximately $130,000. This includes costs under Sections 7, 8, and 9 of the Regulations to the Weed Control Act as well as costs involved with weed control along riverbanks.

## LAND EVALUATION AND PLANNING SERVICE

The LEAPS program continued to grow, reaching and surpassing the 50 farmer client mark in 1989. In addition, final approval for the acquisition and incorporation of GIS technology into the service was received near year's end. The announcement initiated a flurry of activities in order to facilitate the anticipated arrival of the system and its efficient implementation into the LEAPS program. This technology will enhance the operation of the LEAPS program by improving the quality and types of products available and by streamlining program functions.

### Phase I

Phase I, the soil survey phase of the Land Evaluation and Planning Service (LEAPS), continued to operate at maximum capacity in 1989. Eleven farms, covering 1,540 hectares (3,850 acres) of land in seven counties, were surveyed during the summer field season. Eight new applicant farms were also interviewed and enrolled in the program. These eight farms are scheduled to be surveyed during the 1990 field season.

In addition to the farm surveys, LEAPS staff also surveyed 275 hectares (688 acres) of blueberry fields in five counties as part of a co-operative survey of blueberry fields.

### Phase II

This marked the second year that Phase II of the LEAPS program was in full production mode. Staff was very busy in 1989 producing the recommendations for the 11 farms surveyed in 1988 and meeting with the farmers from 1989 to determine their requirements. In total, 41 fertilizer and lime recommendations, nine drainage strategies, six deep-tillage strategies, five land-clearing strategies, nine dairy herd feed requirement calculations, and 10 crop rotation plans were delivered in 1989. Recommendations were delivered in both a coordinated report, with appendices of relevant government publications, and a map format.

The development of "Fertilizer Expert" software, designed to provide accurate, uniform, comprehensive fertilizer plans for farmers in a timely and efficient manner, was a major accomplishment in 1989. This program represents the first example of a product developed for LEAPS that has application to all Nova Scotia livestock farms.

### Cartographic Laboratory

In 1989, the cartographic laboratory produced 38 soils maps for farms surveyed during the year. In addition, the air photo mosaic format was redesigned, and mosaics were prepared for 8 of 12 farms surveyed. The conversion of backlog maps to new format structures also continued, with a total of 52 revised line maps prepared.

Phase II (interpretive map products) continued to undergo development and modification and five land-clearing map products were prepared. Standardized map templates were designed for a number of the Phase II products to improve the map format and consistency of all maps produced.

## NOVA SCOTIA SOILS INSTITUTE

The Nova Scotia Soils Institute continued growth and development in 1989 and dealt with a number of topics including the following:

- The Nova Scotia Soils Institute Soil Research Strategies document developed in 1986 was reviewed and revised in 1989, and a revised document titled "Nova Scotia Soils Institute Strategies for Soil Research" was released.

- The institute provided continued input to the National Soil Conservation Program (NSCP). In 1989, the institute provided provincial expertise on issues pertaining to the development and signing of an accord on soil and water conservation issues in Nova Scotia.

- The development of a soil conservation response team under the Nova Scotia Department of Agriculture and Marketing was recommended by the institute in 1989. The team would be charged with the task of providing a consistent and coordinated information dissemination service to farmers on matters relating to soil conservation. Efforts will continue towards the development and implementation of the team in 1990.

- The mailing list of the institute was enlarged to include all those in the province and in the region involved in soil-related work. This action generated additional interest in the institute and further increased the mailing list.

- An extension program of tours and workshops promoting soil research activities in Nova Scotia was discussed and approved by the Institute. The institute-sponsored programs will be initiated in 1990 with a proposed fall tour of research projects in the Colchester County area.

- The Institute continued to review and evaluate proposed projects in order to determine their relevance to research strategies. The institute also provided technical and management support for projects as requested in 1989. Projects reviewed by the Institute or supported in the past year, included:

  Educational Packages Project

  Soil Test Calibration Project

  Subsoiling Project

  Drainage Project

  Soil Compaction and Blueberry Yields Project

**PROVINCIAL LABORATORY SERVICES**

Statistical summaries of samples analyzed in the Soil Chemistry Lab, Soil Physics Lab, and Pesticide Residue Lab appear in the three tables at the end of this section.

Field soil receipts were the highest ever recorded and surpassed the 1988 level by 22 per cent.

Greenhouse soil samples continued to decline, both from agriculture sources and from Lands and Forests.

Feed samples increased by 6.7 per cent, with the forage component increasing by 15 per cent. This is a continuation of the trend evident over the past several years, whereby forage samples have doubled over the past five years.

Tissue samples increased slightly from the 1988 level; a slight increase in samples from the research component being responsible.

Water samples increased by 21 per cent with domestic sources and the Kings County Well Water survey being primarily responsible for the increase.

Approximately 70 per cent of analyses in the Soil Physics Lab were conducted in support of LEAPS. Twenty-seven per cent of analyses were conducted in support of a soil compaction study being conducted by the Nova Scotia Blueberry Institute.

In 1989, the Atlantic Province Pesticide Residue Laboratory became the sole responsibility of the Nova Scotia Department of Agriculture and Marketing under the Analytical Services Section of the Soils and Crops Branch. Service continues to be offered to other Atlantic provinces and other government departments on a user-pay basis.

**Five-Year Laboratory Sample Summary**

| Material | 1985 | 1986 | 1987 | 1988 | 1989 | % Change |
|---|---|---|---|---|---|---|
| **Soils** | | | | | | |
| Field | 13,090 | 12,331 | 13,096 | 11,996 | 14,656 | |
| Greenhouse | 2,415 | 2,734 | 2,938 | 1,951 | 1,494 | |
| Total | 15,505 | 15,065 | 16,034 | 13,947 | 16,150 | +15.8% |
| **Feed** | | | | | | |
| Forage | 3,840 | 4,386 | 5,968 | 6,529 | 7,508 | |
| Cereal | 715 | 1,085 | 1,596 | 675 | 887 | |
| Milled feed | 1,961 | 2,047 | 1,881 | 2,056 | 986 | |
| Total | 7,449 | 8,443 | 10,484 | 10,314 | 11,002 | +6.7% |
| **Tissue** | | | | | | |
| Commercial | 2,130 | 2,343 | 2,850 | 2,491 | 2,370 | |
| Research | 1,110 | 1,614 | 1,045 | 555 | 853 | |
| Total | 3,240 | 3,957 | 3,895 | 3,046 | 3,223 | +5.8% |
| **Water** | 1,372 | 2,298 | 3,199 | 2,783 | 3,363 | +20.8% |
| **Misc.** | 193 | 175 | 951 | 321 | 251 | |
| **Total** | 27,759 | 29,938 | 34,563 | 30,273 | 33,989 | +12.3% |

## Soil Physics Lab

| | 1987 | 1988 | 1989 |
|---|---|---|---|
| Particle Size | 523 | 834 | 765 |
| pH | 1,046 | 1,434 | 1,264 |
| Bulk density | 224 | 661 | 529 |
| Hydraulic conductivity | 224 | 412 | 146 |
| Organic carbon | 152 | 251 | 239 |
| Cation exchange capacity | 28 | 85 | 49 |
| Moisture retention | 161 | 341 | 231 |
| Moisture | | 64 | 383 |
| **Total** | 2,358 | 4,122 | 3,606 |

## Pesticide Analysis

### Samples Received January 1 to December 30, 1988

| | N.B. | N.S. | P.E.I. | NFLD. | N.S. DEPTS. | OTHER 1989 | TOTAL 1988 | TOTAL |
|---|---|---|---|---|---|---|---|---|
| Soil | 2 | 16 | | 13 | | 7 | 38 | 61 |
| Water | 1 | 3 | 1 | | 237* | 14 | 56 | 132 |
| Plant Material | 4 | 9 | 44 | 5 | | 25 | 43 | 110 |
| Milk | 15 | | | | | | 15 | 8 |
| Vomitoxin | 7 | 17 | 3 | | | 1 | 26 | 69 |
| Other | | 12 | 2 | | | | 13 | 5 |
| Total | 29 | 57 | 3 | 18 | 237* | 47 | 391 | |
| Total 1988 | 62 | 98 | 60 | 3 | 119 | 45 | | 387 |

* Includes 209 samples from Kings County Well Water Survey.

## SOIL AND CROP IMPROVEMENT ASSOCIATIONS

Soil and Crop Improvement Associations across the province were very active in 1989. The 12 associations have a combined membership of approximately 750 members. The county association directors work closely with soil and crop specialists and agricultural representatives to encourage the improvement of yields and quality in livestock feeds as well as good agronomic practices in general.

## FERTILIZER ASSISTANCE POLICY

The Fertilizer Assistance Policy was in full operation in 1989. A total of 1,806 applications were processed, representing 1,722 individual claimants, and $1,579,589.90 in assistance was paid out. This is down slightly from 1988–89. A table giving a summary of historic expenditure on the policy follows. The average claim size has been increasing annually. During the current policy year, the lower claim limit was raised from $200 to $400, so the average claim size increased dramatically as the number of processed claims decreased.

Almost 45 per cent of claimants received less than $500 in assistance, while almost 12 per cent received their maximum grant of $2,500.

The table at the end of this section shows the breakdown of claims on a county basis. The larger agricultural counties such as Kings, Colchester, Hants, and Cumberland received the most assistance.

Forage crops represented almost 66 per cent of the indicated hectares fertilized.

The total of 78 031 ha represented about 50 per cent of what statistics would show as "improved farmland" in Nova Scotia. The rest apparently does not get fertilized on a regular basis. This compares to 76 353 ha indicated as being fertilized in the previous year.

**Historic Expenditures—Fertilizer Assistance Policy**

| Policy Year | No. of Applications | Average Application | Total Expenditure |
|---|---|---|---|
| 1989–90 | 1806 | $874.63 | $1,579,589.90 |
| 1988–89 | 2075 | $777.70 | $1,613,697.99 |
| 1987–88 | 2079 | $725.20 | $1,507,681.94 |
| 1986–87 | 2075 | $698.15 | $1,448,659.61 |
| 1985–86 | 2251 | $695.09 | $1,564,666,79 |
| 1984–85 | 2387 | $660.83 | $1,575,398.26 |
| 1983–84 | 2430 | $655.17 | $1,592,070.65 |
| 1982–93 | 2481 | $638.30 | $1,583,628.30 |
| 1981–82 | 2471 | $603.69 | $1,499,952.27 |

**Fertilizer Assistance Policy 1989–90**

| County | No. of Claimants | Average Claim | Total Expenditure |
|---|---|---|---|
| Annapolis Co. | 92 | $784.45 | $72,169.80 |
| Antigonish Co. | 115 | 1114.42 | $128,158.84 |
| Cape Breton Co. | 53 | 873.91 | $46,317.10 |
| Colchester Co. | 223 | 1007.53 | $224,678.20 |
| Cumberland Co. | 151 | 923.30 | $139,417.88 |
| Digby Co. | 13 | 384.62 | $5,000.05 |
| Guysborough Co. | 20 | 538.75 | $10,774.95 |
| Halifax Co. | 66 | 1083.22 | $71,492.63 |
| Hants Co. | 207 | 938.98 | $194,369.10 |
| Inverness Co. | 72 | 912.36 | $65,689.71 |
| Kings Co. | 359 | 1113.77 | $399,841.90 |
| Lunenburg Co. | 120 | 491.80 | $59,015.80 |
| Pictou Co. | 156 | 786.36 | $122,672.04 |
| Queens Co. | 11 | 328.39 | $3,612.25 |
| Richmond Co. | 7 | 282.45 | $1,977.18 |
| Shelburne Co. | 1 | 170.64 | $170.64 |
| Victoria Co. | 10 | 800.40 | $8,004.03 |
| Yarmouth Co. | 46 | 570.05 | $26,222.25 |

## LAND AND CREDIT SERVICES

The Agricultural Development and Credit Services Branch of the Nova Scotia Department of Agriculture and Marketing provides administrative services to the Nova Scotia Farm Loan Board and financial and loan counselling to established, developing and potential new farmers. The branch administers the department's Land Purchase and Leasing Program, Interest Sudsidy Program, and the Young Farmers Interest Forgiveness Program. Staff are also responsible for the administration of the Timber Loan Board. Personnel of the branch are located in Truro, Kentville, and Antigonish.

Professional staff had extensive contact with farmers, farm industry people, and the public in general in 1989 with 2,089 farm visits, 1,691 office calls and 5,276 telephone calls. The statistics do not include the service provided by Head Office support staff through phone calls or office visits.

Statistics relating to the operation of the board are published in the 1989–90 Annual Report of the Nova Scotia Farm Loan Board.

The branch is primarily associated with assisting and promoting the development of the agricultural industry in Nova Scotia with below-market-rate loan funds. It works in co-operation with individual farmers, farm organizations, and staff of the other branches of the Department of Agriculture and Marketing to ensure the continued growth of the industry and people involved.

A major emphasis of the branch is to help improve financial skills of client farms in order to assist in resolving instances of financial difficulty. In addition, staff and board members continued to work closely and carefully in conjunction with other department staff to deal with the financial difficulties faced by farmers, particularly those in the fur sector.

Since the Nova Scotia Farm Loan Board began in 1932 as the Nova Scotia Miners Settlement Board, staff and board members have aided in the growth of Nova Scotia's agricultural industry. While it is difficult to measure the contribution of any one person in this branch or any other branch or any present or past Board member, there is no doubt that everyone has made his or her contribution to the growth of this province's agricultural industry.

Sincere appreciation is extended to all for their excellent work in 1989. Thanks are also given to the members of the board for their work and counsel on behalf of the farmers and the agricultural industry of Nova Scotia.